

Docket No. : PARNLD.001A
Application No. : 10/699,485
Filing Date : October 30, 2003

Customer No.: 20,995

Applicant : Vernon, et al.
App. No : 10/699,485
Filed : October 30, 2003
For : MAGNETIC RAKE
Examiner : Terrell Howard Matthews
Art Unit : 3654

**ON APPEAL TO THE BOARD OF PATENT APPEALS AND INTERFERENCES
APPLICANT'S SECOND AMENDED APPEAL BRIEF**

Mail Stop Appeal Brief-Patents

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the Notice of Appeal filed on May 11, 2006, and in response to the Notification of Non-Compliant Appeal Brief mailed on December 8, 2006, Applicant submits this Second Amended Appeal Brief.

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I. REAL PARTY IN INTEREST

Pursuant to 37 C.F.R. 41.37(C)(1), Applicant hereby notifies the Board of Patent Appeals and Interferences that Bradley G. Vernon, of 625 Funston St., San Luis Obispo, California 93401 and Patrick D. Arnold of 4915 Jespersen Rd., San Luis Obispo, California 93401, are the real parties of interest.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF CLAIMS

Claims 1-3 and 5 of this application have been canceled. Claims 10-12 are withdrawn from consideration. The remaining claims of the application, namely, Claims 4, 6-9, and 13-19 have been finally rejected. Claims 4, 6-9, and 13-19 are hereby being appealed.

IV. STATUS OF AMENDMENTS

No amendment has been made to the application subsequent to the final rejection mailed on January 12, 2006.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Summary of the Claimed Subject Matter in General

This invention relates to tools used for clean-up at construction sites, playgrounds, and other locations, and, in particular, to a tool for collecting nails and other ferro-metallic items. Screws, nails, metal parts, and the like are often discarded on the ground throughout the day at worksites and can be very hazardous to people, vehicles, and machinery. These items, if not immediately picked up, may become buried in sand or gravel, hidden in weeds, or lodged in the ground, especially if the soil has become hardened and compacted, as after a rain.

Hand-held magnetic wands or other magnetic implements that can be waved or lightly dragged over the ground to attract ferro-metallic items off the surface cannot agitate the soil or other ground cover sufficiently to consistently unearth and collect the nails or other dangerous ferro-metallic items from the ground.

One solution to the problem has been to first mechanically agitate the ground with a conventional rake and then to follow up with a magnetic pick-up device, making the job a two-step process and requiring two different tools in order to do an effective job.

The invention solves this problem by providing a construction strength rake that includes a hollow, toothed rake body enclosing one or more magnets. As the rake is used at the jobsite or other area being cleaned, the rake teeth agitate the ground cover sufficiently to unearth, dislodge, and catch any discarded nails, screws, or other ferro-metallic items, while the one or more magnets enclosed in the rake body simultaneously attract the ferro-metallic debris to the rake body for collection and proper disposal.

Figures 1 and 2 below, reproduced from the Applicant's specification, illustrate one embodiment of the invention. Figure 1 provides a side cutaway view of the toothed rake body with the square magnet enclosed. Figure 2 shows a plan view of the rake body showing the profile and relative shape of the teeth.

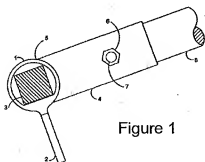


Figure 1

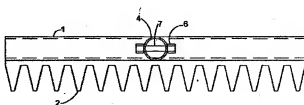


Figure 2

Vernon, et al.

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Concise Explanation and Mapping of the Claims on Appeal

In this section, the claims are briefly explained and are mapped to the specification by paragraph and line number, using the paragraph numbers that correspond to the published application (Pub. No. US 2004/0182756 A1). The only exception to this mapping is for references to the Detailed Description of the Invention paragraphs, because these paragraphs as shown in the published application do not reflect the amendments made in the Preliminary Amendment filed on August 5, 2004. Thus, reference to the Detailed Description of the Invention paragraphs will use the paragraph numbers from the Preliminary Amendment. A copy of the paragraphs from the Preliminary Amendment is provided in the Preliminary Amendment Appendix, beginning on page 17 of this Second Amended Appeal Brief.

Independent Claim 4 recites a magnetic rake with a handle that is attached to a hollow, unitarily formed, toothed rake body containing one or more magnets. Support for Claim 4 may be found throughout the Specification and Figures, including the following:

Handle attached to the rake body:

See FIG. 1, reference number 8.

See Abstract, lines 11-13.

See Paragraph [0009], lines 1-3.

See also Preliminary Amendment, Paragraph [001], lines 11-17.

Hollow unitarily formed toothed rake body:

See FIGS. 1 and 2, reference numbers 1 and 2.

See Abstract, lines 7-9.

One or more magnets enclosed in rake body:

See FIG. 1, reference numbers 1 and 3.

See Abstract, lines 5-7.

See also Preliminary Amendment, Paragraph [001], lines 17-20.

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Independent Claim 13 recites a method of collecting ferro-magnetic items from a surface area by operating a hollow, unitarily formed, toothed rake body containing at least one magnet over the surface area and allowing ferro-magnetic items from the surface area to collect on the rake body. Support for Claim 13 may be found throughout the Specification, including the following:

Operating a magnetic rake over a surface area and allowing ferro-magnetic items to collect on the rake body:

See Abstract, lines 3-5.

See paragraph [0006], lines 1-3.

See paragraph [0007], lines 5-7.

See also Preliminary Amendment, Paragraph [001], lines 1-3.

See also Preliminary Amendment, Paragraph [002], lines 9 -11.

Hollow unitarily formed toothed rake body (as listed above with reference to Claim 4):

See FIGS.1 and 2, reference numbers 1 and 2.

See Abstract, lines 7-9.

One or more magnets enclosed in rake body (as listed with reference to Claim 4):

See FIG. 1, reference numbers 1and 3.

See Abstract, lines 5-7.

See also Preliminary Amendment, Paragraph [001], lines 17-20.

Independent Claim 16 recites a system for collecting ferro-metallic items that includes means for agitating a ground surface that enclose means for attracting ferro-metallic items to the means for agitating using magnetic force. Support for Claim 16 may be found throughout the Specification and Figures, including the following:

See FIGS. 1and 2, reference numbers 1, 2, and 3.

See Abstract, lines 5-9.

See Paragraph [0008], lines 3-4.

See also Preliminary Amendment, Paragraph [001], lines 3 - 4 and 17-20.

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VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The Examiner has rejected Claims 4, 6-9, and 13-19 under 35 U.S.C. §103(a) as being unpatentable over Jameson (U.S. 5,395,148) in view of Lantz (U.S. 1,927,873). In particular, with respect to the various claims, the Examiner has asserted that it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Jameson to include various features taught by Lantz.

VII. ARGUMENT

As background to the arguments, it will be useful to briefly review the definition of the term "rake" as it applies to a tool. As submitted in the response dated April 11, 2006 and received by the Patent Office on April 14, 2006, the definition of the term "rake" includes a "single, most characteristic feature of any rake, namely a head with projecting teeth, otherwise known as tines or prongs." Applicants also submit that virtually all definitions of the rake include the characteristic of having teeth, prongs, or tines to perform the raking function of the tool.

The Examiner has rejected all of the pending claims based on a combination of the references of Jameson and Lantz. Applicant respectfully disagrees with this assertion, and submits that, according to MPEP §2413.01, "a proposed modification cannot render the prior art unsatisfactory for its intended purpose or change the principle of operation of a reference."

Jameson

Figure 1 of Jameson is reproduced on the following page. This preferred form of Jameson's device includes a handle and a cylindrical housing that encloses a plurality of magnets. Jameson describes the tool as a device for collecting metal particles from the floor, "such as the area around a metal turning lathe in a machine shop." (col. 2, lines 12-14)

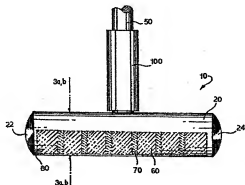


Figure 1
Jameson et al.

It is relevant to note that Jameson describes the ferro-metallic material being collected as "particles." One can assume that the material may, therefore, at least in some instances, include particles that are much smaller than the size of a nail.

Furthermore, as exemplified in Figure 4, reproduced below, every embodiment of the device described by Jameson includes a cleaning cuff 100 that is configured to encircle and slide over the magnet housing of the device in order to push the ferro-metallic particles off the housing. This ability to slide a cuff over the housing to remove the metal particles is described as an "important function of the invention," (col. 3, line 18) and aspects of the invention that work in cooperation with the cuff, in particular, the flux free zone of the magnet housing, are described as "essential to efficient operation of the invention." (col. 3, lines 13-17).

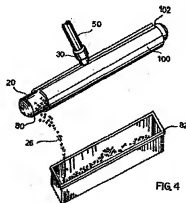


Figure 4
Jameson, et al.

To enable the functioning of Jameson's cleaning cuff, the body of the device must be suitably shaped to allow the cuff to slide smoothly over its surface. For example, the one alternative shaping of the housing and cuff taught by Jameson, in Figure 6 reproduced below, similarly allows for smooth sliding of the cuff over the housing. Throughout the disclosure, the benefits of the smooth, streamlined housing are repeatedly extolled.

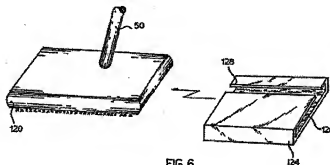


FIG. 6
Jameson, et al.

Thus, although Jameson calls his device a "rake," Jameson does not include the single most characteristic feature of any rake, namely a head with projecting teeth, otherwise known as tines or prongs. Nor does Jameson include any suggestion or motivation to add teeth (and especially the plow-shaped teeth of Lantz, as will be explained below) to its streamlined-housing-and-cuff arrangement for the collection of ferro-metallic particles.

Indeed, the addition of teeth would make the device *less* effective for the collection of metallic particles such as are found on the floor around a metal turning lathe in a machine shop, because the particles would frequently be small enough to slip through the teeth. The addition of teeth would also render the tool unsatisfactory for what Jameson asserts as "essential to efficient operation of the invention" (col. 3, lines 13-17), namely the provision of a streamlined housing over which a snugly shaped cuff may smoothly slide to push off the collected metallic particles. Furthermore, the teeth

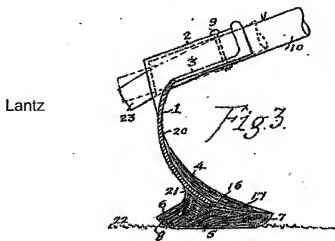
would effectively hold the magnet housing up off the surface of the floor, thereby causing the modified device to deviate from the inventor's stated purpose of maintaining direct contact with the surface to be swept.

For at least the above-enumerated reasons, the modification of Jameson's housing by adding teeth would thus render the device unsatisfactory for its intended purpose.

Lantz

Furthermore, the rake body and rake “teeth” taught by Lantz are particularly unsuitable for a device designed to rake and magnetically collect screws, nails, and other ferro-metallic items, as will be shown below.

Lantz teaches a “nonleaf holding rake.” Lantz states, at the beginning of the disclosure, “The purpose of my invention is to provide a rake to which leaves will not adhere.” (Lines 4-6) Toward this end, Lantz provides a specially shaped rake body, depicted in side view in Figure 3, reproduced below. (Applicant has annotated the Figure with shading to more clearly point out the rake body’s distinctive profile.)



As described in Lantz, "instead of having isolated teeth as is usual in conventional types of rakes, the front ribs 4 spaced apart lengthwise of the body in their spacing

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simulate ordinary rake teeth but they are formed as curved ribs integral with the body.” (Lines 43-48) Lantz goes on to describe, “Ribs or shoes 5 are formed on the underside of the body, transversely thereof,...as a continuation of ribs 4.” Thus, the rake includes pairs, each formed from a rib portion 4 and a plow-shaped shoe portion 5, which “simulate teeth” spaced at intervals across the length of the rake body.

Using Lantz’s specially shaped rake, “the leaves which are gathered in front of the rake roll upward without adhering to the body because the projecting ribs 4 prevent this, and the small leaves will not pass through beneath the body, but the grass can freely pass between the shoes 5 and beneath the edge 16” (lines 93-98).

The addition of Jameson’s magnets to the rake taught by Lantz would not in any way enhance the non-sticking operation of the rake with respect to leaves, and, indeed, if ferro-metallic materials were interspersed amongst the leaves being raked, might even impede the non-leaf holding function of the rake by catching some of the leaves in between the collected materials and the rake.

Lantz’s rake body, while unitary formed, is not hollow, nor is there any suggestion to include a hollow recess within the rake body to enclose magnets or for any other reason. Moreover, the addition of magnets would be counter-intuitive, because the function of magnets is to attract, while the stated purpose of Lantz is to ensure that leaves do *not* adhere to his rake.

Summary

For the reasons given above, Applicant submits that the combination of Jameson and Lantz in order to establish obviousness of the current invention is improper. Combining the references would render each of the references unsatisfactory for its intended purpose and change the principle of its operation. Applicant, therefore, respectfully requests that the rejection of Claims 4, 6-9, and 13-19 be withdrawn.

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With respect to the individual claims:

Claims 4, 6, and 7

The Examiner states that Jameson discloses a "Magnetic Rake," but that Jameson does not disclose that the rake body is toothed. The Examiner further states that, "It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Jameson to include an aluminum toothed body as taught by Lantz so that the teeth could agitate and pull up particles from the ground."

Applicant respectfully disagrees and submits that, as stated above, the combination of Jameson and Lantz to establish obviousness of the current invention is improper. Combining Jameson and Lantz would defeat the purposes of each of the references, since the Jameson device would no longer be close to the ground to pick up shavings or streamlined enough to allow for use of a cleaning cuff, and the Lantz device would not easily release the articles being raked, which is its primary purpose. The Examiner has not shown that either reference suggests a combination with the other, and, in fact, the references teach against such a combination. The Applicant therefore respectfully traverses the Examiner's rejections of Claims 4, 6, and 7 and requests the allowance of same.

Claims 8 and 9

The Examiner asserts (a) that it would be obvious to a person of ordinary skill in the art to modify the handle of Jameson as described in Claim 8, and (b) that Jameson teaches the handle as claimed in Claim 9. The Examiner further asserts that, accordingly, the combination of Jameson and Lantz renders both Claim 8 and Claim 9 obvious. However, as described above, Applicant submits that, notwithstanding the description of the handle, the combination of Jameson and Lantz for purposes of establishing obviousness of the present invention is improper. The Applicant therefore respectfully traverses the Examiner's rejections of Claims 8 and 9 and requests the allowance of same.

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Claims 13-14 and 16-19

The Examiner states that Jameson discloses a method of collecting ferro-magnetic materials from a surface area, but that Jameson does not disclose that the rake body is toothed. The Examiner further states that, "It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Jameson to include an aluminum toothed body as taught by Lantz so that the teeth could agitate and pull up particles from the ground."

Applicant respectfully disagrees and submits that, as stated above, the combination of Jameson and Lantz to establish obviousness of the current invention is improper. In combining the references, the Examiner is selecting features from the two references based on the teaching of the present application. Jameson does not teach agitating the surface of the floor from which he is removing particles. Lantz does not suggest having anything stick to his rake; in fact, his focus is just the opposite. Combining the references is, therefore, pure hindsight, and, as such, is improper motivation to combine. The Applicant therefore respectfully traverses the Examiner's rejections of Claims 13-14 and 16-19 and requests the allowance of same.

Claim 15

The Examiner asserts that it would be obvious to a person of ordinary skill in the art to combine the devices of Jameson and Lantz and to invert the resulting rake body so that the teeth face away from the surface being raked. However, as described above, Applicant submits that, notwithstanding the position of the teeth with respect to the surface being raked, the combination of Jameson and Lantz for purposes of establishing obviousness of the present invention is improper. The Applicant therefore respectfully traverses the Examiner's rejections of Claim 8 and requests the allowance of same.

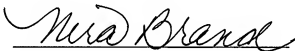
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CONCLUSION

Because all of the Examiner's rejections are based on a combination of the Jameson reference and the Lantz reference, and because combination of the Jameson reference and the Lantz reference does not teach or suggest each and every element of the claims, the Applicants respectfully submit that the claims of this application are allowable and that the rejections should be overruled by the Board of Appeals.

Respectfully submitted,



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VIII. CLAIMS APPENDIX

The following is a listing of the claims being appealed:

4. A magnetic rake, comprising:
 - one or more magnets;
 - a hollow, unitarily formed, toothed rake body contain said magnets; and
 - a handle attached to said rake body.
6. The magnetic rake of Claim 4, wherein said hollow, unitarily formed toothed rake body is formed of a non-magnetic alloy.
7. The magnetic rake of Claim 6, wherein said non-magnetic alloy is aluminum.
8. The magnetic rake of Claim 4, wherein said handle is detachably connected to said hollow, unitarily formed toothed rake body using a mechanical system.
9. The magnetic rake of Claim 4, wherein said handle is permanently attached to said hollow, unitarily formed toothed rake body.
13. A method of collecting ferro-magnetic items from a surface area, said method comprising the acts of:
 - operating over said surface area a hollow, unitarily formed toothed rake body that contains at least one magnet inside; and
 - allowing ferro-magnetic items from said surface area to collect on said rake body.
14. The method of Claim 13, wherein operating said hollow, unitarily formed toothed rake body comprises agitating said surface area with said teeth to loosen said ferro-magnetic items.
15. The method of Claim 13, wherein operating said hollow, unitarily formed toothed rake body comprises inverting said rake body such that a toothed portion of said hollow, unitarily formed toothed rake body faces away from said surface area.
16. A system for collecting ferro-metallic items from an area, said system comprising:
 - means for agitating a ground surface of said area; and

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means, enclosed within said means for agitating, for attracting ferro-metallic items to said means for agitating using magnetic force.

17. The system of Claim 16, wherein said agitating means comprise hollow, unitarily formed toothed rake body with triangular teeth.

18. The system of Claim 16, wherein said agitating means comprise a hollow, unitarily formed toothed rake body with non-triangular teeth.

19. The system of Claim 16, wherein said attracting means comprise magnets housed inside a hollow, unitarily formed toothed rake body.

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IX. PRELIMINARY AMENDMENT APPENDIX

The following paragraphs [001] and [002] are the amended version of the Detailed Description of the Invention, as amended in the Preliminary Amendment of August 5, 2004. They correspond to paragraphs [0009] and [0010] in the published application.

[001] The primary design feature behind this magnetic rake is the ability to be used for two functions, raking and magnetic pick up at the same time. The magnetic rake is a hand-operated magnetic raking device that comprises a housing with a magnet or magnets placed inside. Using a non-magnetic alloy such as aluminum, the body 1 is extruded into a convenient length to be used for the particular application. For instance a length of 14 inches is ideal for clean up around existing shrubbery. In some embodiments, the body 1 is cylindrical in shape. Teeth 2 are formed in the extrusion by machining, stamping, cutting, etc. to help with agitation of the soil. A handle sleeve 4 is attached to the extrusion in a process, most likely welding 5 in a fashion to provide strength during use. A handle is mounted to the handle sleeve 4 to provide for easy push/pull use of the magnetic rake. Although an inserted handle 8 is shown, a non removable handle could be welded on as well. Having a removable handle 8 serves a dual purpose, allowing replacement at a later date as well as economical shipping cost. This handle could be attached with a mechanical system 6 through a hole 7 in both the handle sleeve 4 and the handle 8. A magnet 3 is placed inside of the extrusion 1 which will provide the magnetic attraction to the ferro-metallic items to be picked up. A square magnet 3 is shown but a variety of shapes can be used.

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[002] This device fills a void in the marketplace for a midsized magnetic pick up tool. The smaller wand type devices are just waved or lightly dragged over the ground in an attempt to pick up ferro-metallic items. Although effective in very tight quarters these devices cannot agitate the soil or other ground cover enough to consistently pick up the dangerous ferro-metallic items. The other option in performing this task is the larger wheeled pick up devices. These are viable options when sweeping larger smooth surfaces clean of ferro-metallic items, but they are unable to get in around shrubbery and other tight areas to retrieve the ferro-metallic items. The magnetic rake submitted here can perform the job of both mentioned items very well. The magnetic rake can be used inverted with the teeth facing up along smooth surfaces to pick up ferro-metallic particles without agitation.

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X. EVIDENCE APPENDIX

No evidence.

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XI. RELATED PROCEEDINGS APPENDIX

No related proceedings.